

Translation

PATENT COOPERATION TREATY

PCT/JP2004/016510



PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PH-2292-PCT	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/JP2004/016510	International filing date (<i>day/month/year</i>) 01 November 2004 (01.11.2004)	Priority date (<i>day/month/year</i>) 05 November 2003 (05.11.2003)
International Patent Classification (IPC) or national classification and IPC C08L 67/04, C08J 5/00, C08K 3/34, 9/04 // C08L 101/16, C08L 67:04		
Applicant TOYOTA JIDOSHA KABUSHIKI KAISHA		

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>3</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of _____ sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>	
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>	

Date of submission of the demand 24 March 2005 (24.03.2005)	Date of completion of this report 15 April 2005 (15.04.2005)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/016510

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:

- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4)
- ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☒ The international application as originally filed/furnished

☐ the description:

pages _____, as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ the claims:

pages _____, as originally filed/furnished

pages* _____, as amended (together with any statement) under Article 19

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ the drawings:

pages _____, as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (*specify*): _____

☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (*specify*): _____

☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/016510

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	4, 5, 9	YES
	Claims	1-3, 6-8	NO
Inventive step (IS)	Claims	4, 5, 9	YES
	Claims	1-3, 6-8	NO
Industrial applicability (IA)	Claims	1-9	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

Document 1: JP, 2003-073538, A (Toyota Central Research and Development Laboratories, Inc.),
March 12, 2003 (03.12.03)

The inventions of claims 1-3 are described in document 1 cited in the ISR; therefore, they do not appear to be novel. Document 1 describes a biodegradable composite material containing a polylactic acid, and a layered clay mineral organized by an onium salt having a hydroxyl group and bonded with the polylactic acid via the hydroxyl group of the onium salt. It describes a method for melting and kneading the organized onium salt and polylactic acid as a method for producing the composite material. Document also describes that a polylactic acid may be any one of a D-polylactic acid, L-polylactic acid, or DL-polylactic acid, or a mixture of two or more kinds thereof.

The present application (claim 1) regulates a polylactic acid-layered clay mineral blend, and "comprising" a layered clay mineral and non-blended polylactic acid; therefore, the inventions relating to claims 1 and 2 of the present application cannot be differentiated from the constitution of the composition obtained by using D-polylactic acid and L-polylactic acid. Also, regardless of difference in methods for producing a polylactic acid-layered clay mineral blend, it is considered that there is no difference in the constitution of obtained polylactic acid-layered clay mineral blends; therefore, this examination finds that the invention relating to claim 3 of the present application cannot be differentiated from the constitution described in document 1 that is identical to the inventions of claims 1 and 2.

The inventions of claims 6-8 are described in document 1 cited in the ISR; therefore, they do not appear to be novel. Document 1 describes injection molding a resin composition.

The inventions of claims 4, 5 and 9 appear to be novel and involve an inventive step over the documents cited in the ISR. None of the publicly known documents discloses a constitution of producing a resin composition, as described in claims 4 and 5 of the present invention, by a method for producing a blends of a layered clay mineral and either one of a poly-L-lactic acid or poly-D-lactic acid, and mixing with the other one of the poly-L-lactic acid or poly-D-lactic acid. According to the test result described in the present application (description, table 1), the resin composition produced by such a method has a high stereo crystal ratio as regulated in claim 9 of the present application, which could not have been achieved by a conventional method, and has beneficial properties such as high thermal resistance and the like; therefore, it is useful in the industry.